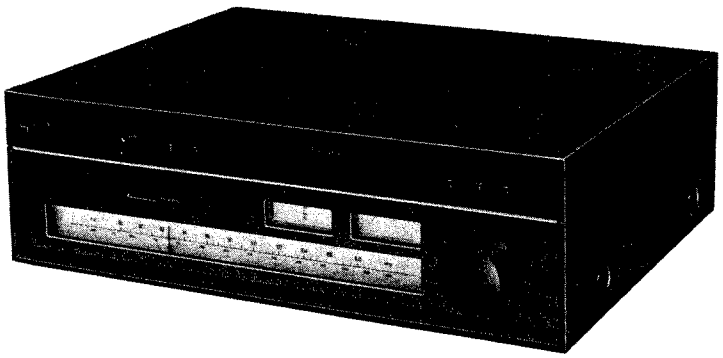
ORDER NO. SD7705-1225

Service Manual

FM/AM Stereo Tuner

ST-8080

(X), (XAL), (XG), (XGH), (XGF), (XSD), (XSW), (XE)



The model ST-8080 [X] is available in Asia, Latin America, Middle East and Africa only.
The model ST-8080 [XAL] is available in Australia only.
The model ST-8080 [XG] is available in European only.
The model ST-8080 [XGH] is available in Holland only.
The model ST-8080 [XGF] is available in France only.
The model ST-8080 [XSD] is available in Scandinavia only.
The model ST-8080 [XSW] is available in Switzerland only.
The model ST-8080 [XE] is available in England only.

TECHNICAL SPECIFICATIONS (IHF)

Specifications are subject to change without notice for further improvement.

FM TUNER SECTION

Frequency range:		88 ~ 108MHz
Antenna terminals:		300Ω (balanced) 75Ω (unbalanced)
Sensitivity:		10.8 dBf (300Ω) 1.9μV (IHF '58)
50 dB quieting sensitivity	**MONO**	13.6 dBf (300Ω) 2.6μV (IHF '58)
	STEREO	34.3 dBf (300Ω) 28.4μV (IHF '58)
Total harmonic distortion	**MONO**	0.15% (1kHz)
	STEREO	0.3% (1kHz)
S/N:	**MONO**	75 dB
Frequency response:	(Variable)	20Hz ~ 18kHz, +0.2 dB, −0.8 dB
	(Fixed)	20Hz ~ 15kHz, +0.2 dB, −0.8 dB
Alternate channel selectivity:		85 dB
Capture ratio:		1.0 dB
Image rejection (at 98MHz):		85 dB
IF rejection (at 98MHz):		100 dB
Spurious response rejection (at 98 MHz):		95 dB
AM suppression:		55 dB
Stereo separation:		45 dB at 1 kHz, 35dB at 10kHz
Leak carrier:	**OUTPUT (variable)**	−65dB (19kHz)
	REC OUT (Fixed)	−70 dB (19kHz, 38kHz)

AM TUNER SECTION

Frequency range:	525 ~ 1605kHz
Sensitivity:	30μV
Selectivity:	25 dB
Image rejection (at 1000 kHz):	45 dB
IF rejection (at 1000 kHz):	40 dB

GENERAL

Output voltage		
	OUTPUT (Variable)	0V ~ 1.4V
	REC OUT (Fixed)	0.6V
Power supply (50/60Hz):		110/120/220/240V 240V Only (Set for Australia)
Power consumption:		14W
Dimensions (W x H x D):		450 x 140 x 367mm (17 23/32"x5 1/2"x14 7/16")
Weight:		8.4kg (18.5 lb.)

TECHNISCHE DATEN (DIN 45 500)

Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

UKW-TUNERTEIL

Frequenzgang:		88 ~ 108MHz
Eingangsimpedanz:		300 ohm (symmetrisch) 75 ohm (unsymmetrisch)
Eingangsempfindlichkeit:		1.8μV beim Rauschverh v. 30 dB, 300Ω 1.6μV beim Rauschverh v. 26 dB, 300Ω 1.4μV beim Rauschverh v. 20 dB, 300Ω 0.9μV beim Rauschverh v. 30 dB, 75Ω 0.8μV beim Rauschverh v. 26 dB, 75Ω 0.7μV beim Rauschverh v. 20 dB, 75Ω
Klirrfaktor:		**MONO** 0,15%, **STEREO** 0,3%
Rauschabstand (±40kHz Hub):		**MONO** 70 dB
Frequenzgang:		20Hz ~ 18kHz, ±1,5 dB
Selektivität:		85 dB
Gleichwellen-Selektion:		1,0 dB
Spiegelsekektion bei 98MHz:		85 dB
ZF-Festigkeit bei 98MHz:		100 dB
Unselektivitätsfestigkeit bei 98MHz:		95 dB
AM-Unterdrückung:		55 dB
Kanaltrennung:		45 dB bei 1kHz, 35 dB bei 10kHz
Hilfsträgerdämpfung (Pilotton):		
	OUTPUT (Variabel)	−60dB (19kHz)
	REC OUT (Fest)	−65 dB (19kHz)
Begrenzung, Einsatzpunkt:		1,2μV
Bandbreite:	**ZF-Verstärker**	250kHz
	UKW-Demodulator	820kHz

AM-TUNERTEIL

Empfangsbereich:	525 ~ 1605 kHz
Empfindlichkeit:	30μV
Selektivität:	25 dB
Spiegelselektion:	45 dB
ZF-Festigkeit:	40 dB

ALLGEMEINE DATEN

Ausgangsspannung:	**OUTPUT (Variabel)**	0V ~ 1,4V
	REC OUT (Fest)	0,6V
Leistungsaufnahme:		14 W
Netzspannung umschaltbar (50/60Hz)		110/120/220/240V
Abmessungen (B x H x T):		450 x 140 x 367mm
Gewicht:		8,4 kg

National Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

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CARACTERISTICS TECHIQUES (IHF) Sujet á changement sans préaris.

PARTIE TUNER FM

Gamme reçue:	88 ~ 108MHz
Bornes d'antenne:	300Ω (symétrique) 75Ω (asymétrique)
Sensibilité:	10,8dBf, (300Ω) 1.9μV (IHF '58)
Sensibilité pour 50dB: MONO	13.6dBf, (300Ω) 2,6μV (IHF '58)
STEREO	34.3dBf,(300Ω) 28.4μV (IHF '58)
Distorsion harmonique totale:	
MONO 0,15% (1kHz), **STEREO** 0,3% (1kHz)	
Rapport S/B:	**MONO** 75 dB
Courbe de réponse:	(Variable) 20Hz ~ 18kHz, +0,2 dB, −0,8 dB
	(Fixe) 20Hz ~ 15kHz, +0,2dB, −0,8dB
Sélectivité en canaux alternés:	85 dB
Rapport de capture:	1,0 dB
Réjection de fréquence image à 98MHz:	85 dB
Réjection FI à 98MHz:	100 dB
Réjection de réception non sélective à 98MHz:	95 dB
Suppression AM:	55 dB
Séparation des canaux:	1kHz 45 dB, 10kHz 35 dB
Résidus de porteuse : OUTPUT (Variable)	−65 dB (19kHz)
REC OUT (Fixe)	−70dB (19kHz, 38kHz)

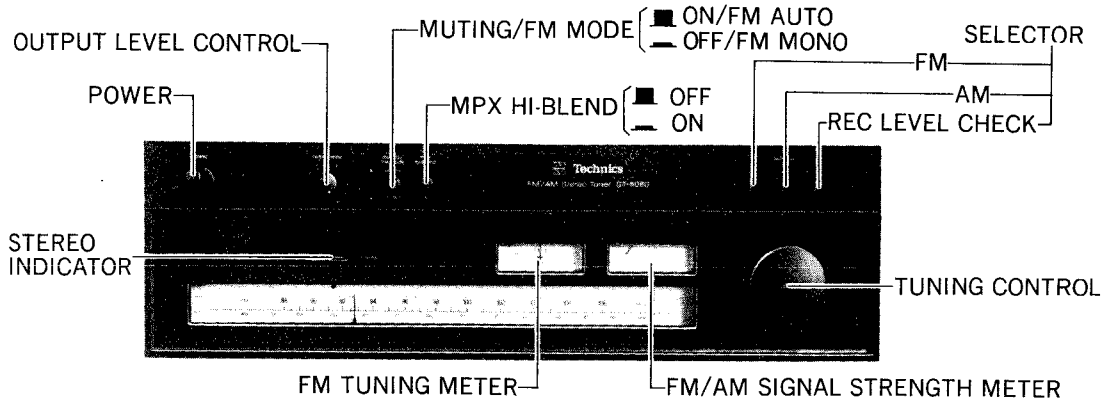
PARTIE TUNER AM

Gamme reçue:	525 ~ 1605kHz
Sensibilité:	30μV
Sélectivité:	25 dB
Réjection de fréquence image à 1000kHz:	45 dB
Réjection FI à 1000kHz:	40 dB

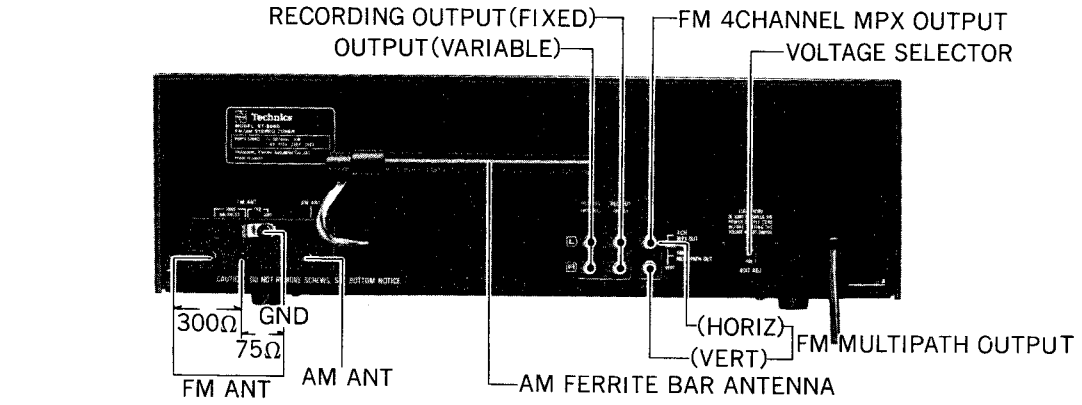
GÉNERALITÉS

Tension de sortie:	**OUTPUT (Variable)**	0V ~ 1,4V
	REC OUT (Fixe)	0,6V
Alimentation (50/60Hz):		110/120/220/240V
Consommation:		14W
Dimensions (L x H x P):		450 x 140 x 367mm
Poids:		8.4 kg

■ LOCATION OF CONTROLS



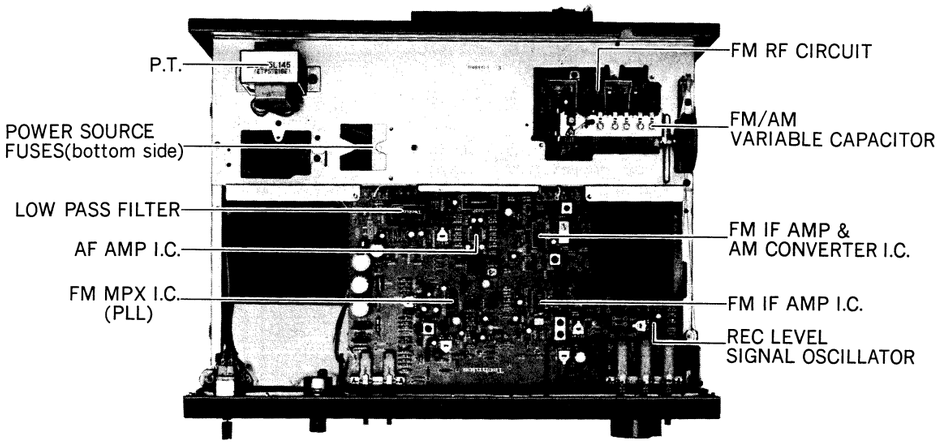
Front Panel View



Rear Panel View

■ RECORDING LEVEL CHECK SWITCH (REC LEVEL CHECK)

The phase shift oscillation circuit consisting of one transistor and CR is incorporated, and when the switch is turned "ON", since wave in the vicinity of "440Hz" is continuously developed from the output terminal at a level equivalent to 50% modulation. (This means that, when the output of 500mV is obtained with signal of 60dB being applied at 100% modulation half of the output which is approximately 250mV is the oscillating output). By utilizing this signal, control the recording level, while watching the meter of the tape deck through the input level control of the tape deck.
(Note) Be sure to turn this switch "OFF" when recording broadcasts or listening in the broadcasts.



Chassis View

■ TO REMOVE FRONT PANEL

1. Remove the cabinet.
2. Pull out the knob for the power switch, and loosen the hexagon socket screw (M3) with the hexagonal wrench key (hexagonal spanner) for drawing out the knob.
3. Remove the front panel set screws. (① to ③ of Fig. 1)
4. Remove 6 bottom board set screws. (④ to ⑨ of Fig. 2)

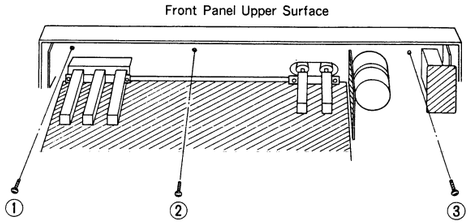


Fig. 1

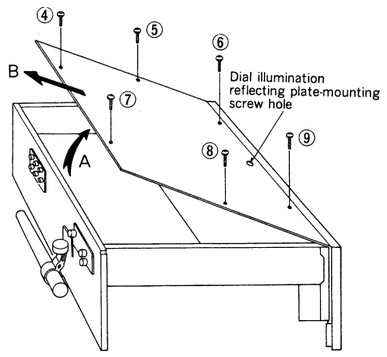
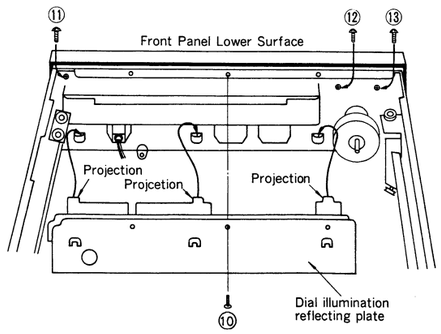


Fig. 2

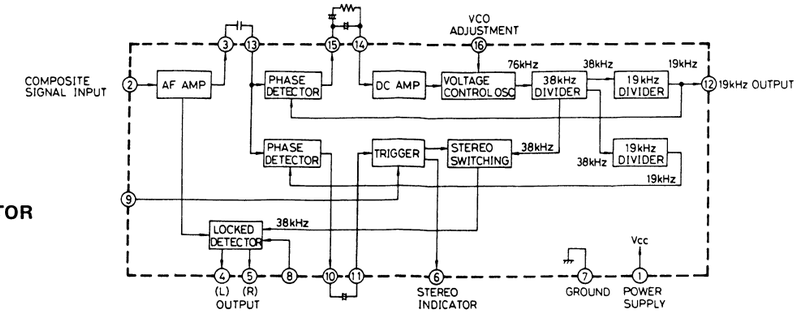
7. Remove 3 set screws for the panel (⑪ to ⑬ in Fig. 3)
8. Draw out the front panel to the front of the set.
9. For attaching, proceed in the reverse order to the above. To install the reflecting plate, initially engage 3 projections of the reflecting panel with corresponding holes in the chassis, and subsequently tighten the screw (⑩ in Fig. 3) at the central portion of the reflecting plate for securing.

5. Since the head of set screw for the dial illumination reflecting panel extends slightly through the hole in the bottom plate as shown in Fig. 2, lift in the direction of the arrow **A** by about 10 cm with subsequent pulling in the direction of the arrow **B** to slip off the bottom plate through the gap in the panel.
6. Unscrew the set screw ⑩ for the dial illumination reflecting plate as shown in Fig. 3 to remove the same reflecting plate. Note that the bottom plate set screws ⑥ and ⑨ also serve for securing the reflecting plate at its opposite edges.

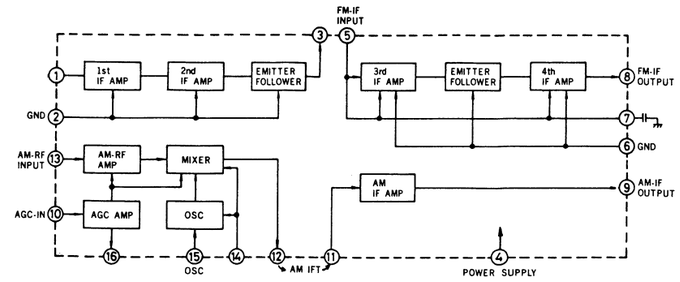


(Set Bottom Side)

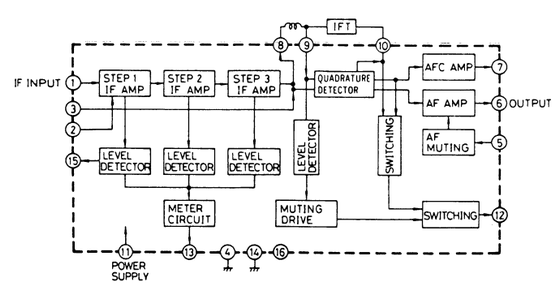
Fig. 3



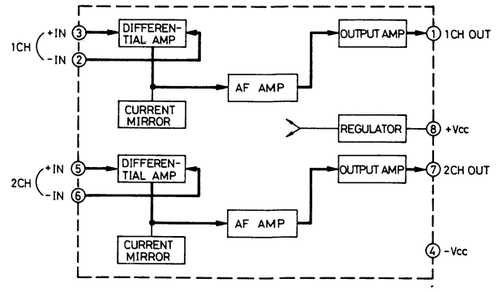
IC301 (AN363)
FM MULTIPLEX
PLL DEMODULATOR



IC201 (AN217)
FM 2 STEPS IF AMPLIFIER
& AM CONVERTER



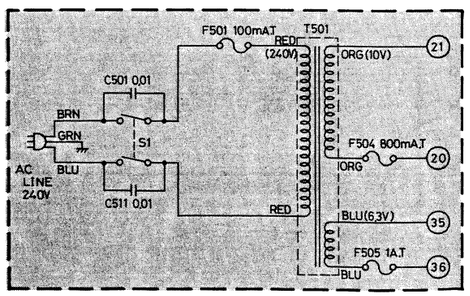
IC101 (AN377)
FM IF AMPLIFIER & DETECTOR



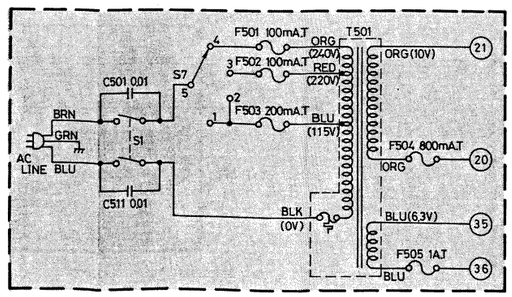
IC401 (SVINJM4558DS)
2CHANNEL AF AMPLIFIER

■ POWER SOURCE CIRCUITS FOR AUSTRALIA & ENGLAND

Only set for Australia [XAL]



Only set for England [XE]



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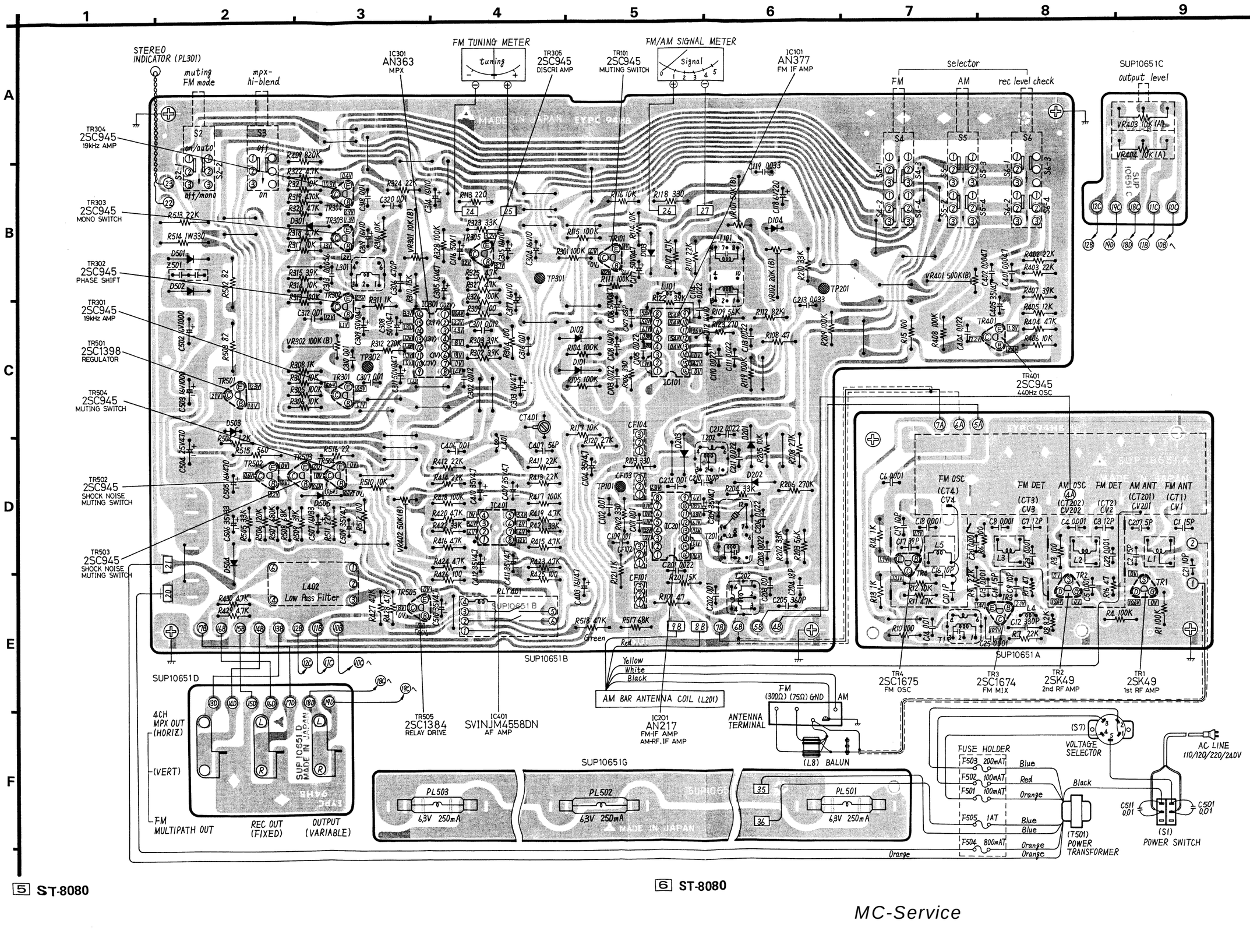
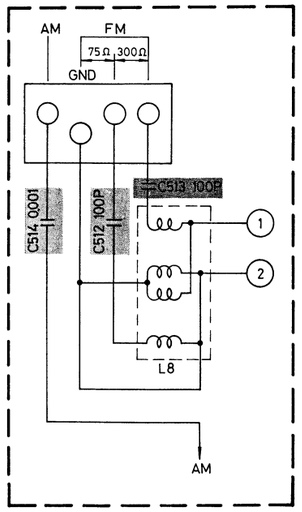
■ PRINTED CIRCUIT BOARD



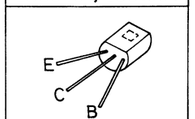
Only set for Australia [XAL]

- **Antenna circuit**

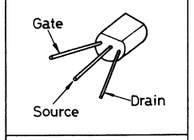


■ TERMINAL GUIDE

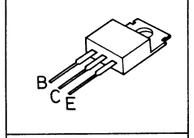
2SC1674 , 2SC1675
2SC945 , 2SC1384



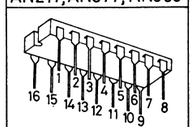
2SK49



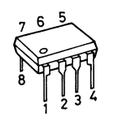
2SC1398

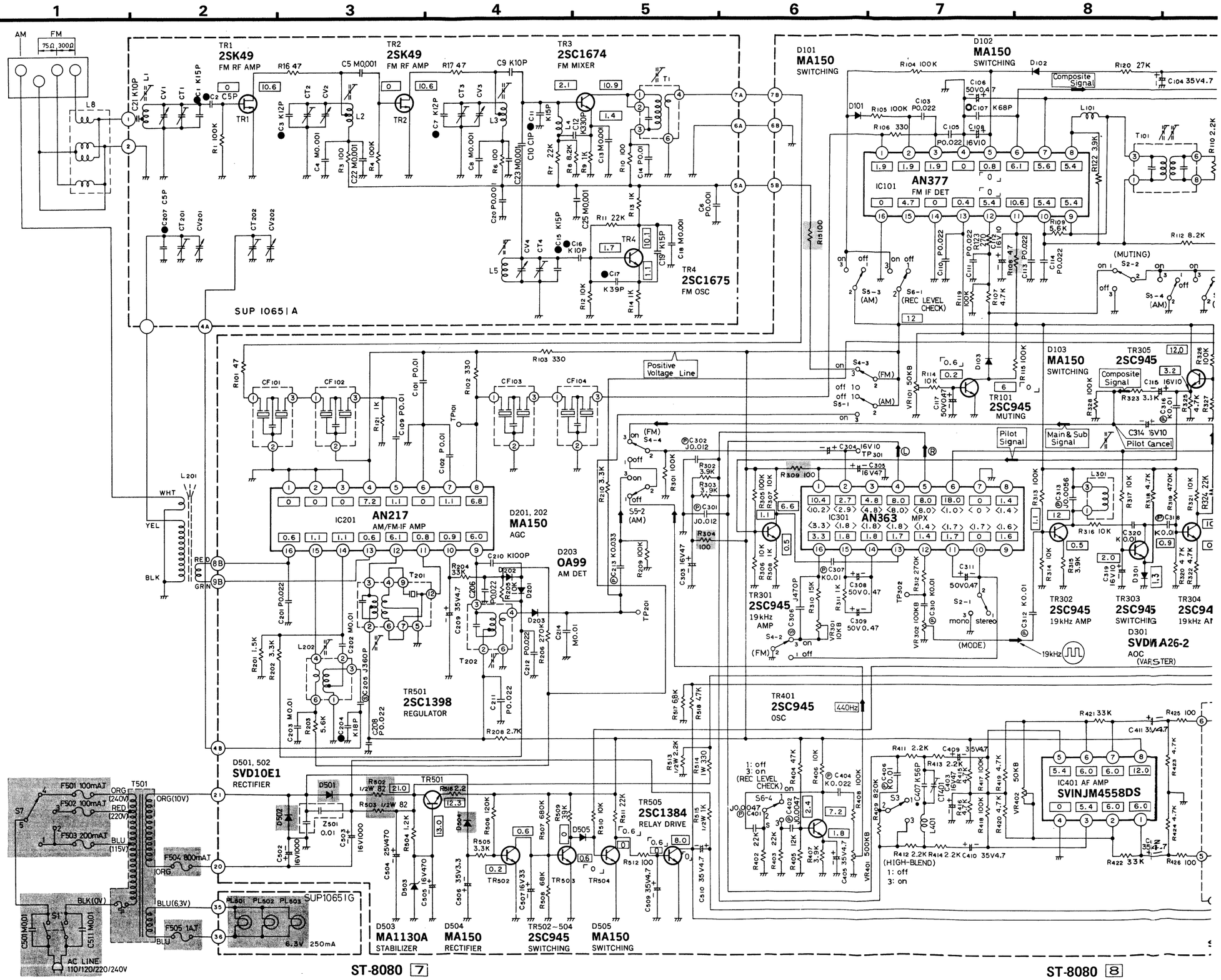


AN217, AN377, AN363



SVINJM4558DS





Schematic Diagram
Model ST-8080

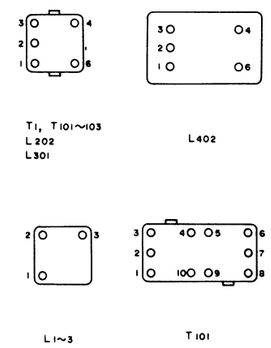
Notes:

1. **S1:** Power source switch in **"OFF"** position
2. **S2-1, S2-2:** Muting /FM mode switch in **"ON/FM AUTO"** position.
   ① ON/FM AUTO ⟷ ③ OFF/FM MONO
3. **S3:** MPX high blend switch in **"OFF"** position.
   ① OFF ⟷ ③ ON
4. **S4-1 ~ S4-4:** FM selection switch in **"FM-ON"** position.
   ① OFF ⟷ ③ FM-ON
5. **S5-1 ~ S5-4:** AM selection switch in **"OFF"** position.
   ① OFF ⟷ ③ AM-ON
6. **S6-1 ~ S6-4:** Recording level check selection switch in **"OFF"** position.
   ① OFF ⟷ ③ ON
7. **S7:** Voltage selector switch in **"240V"** position
   ④ 240V ⟷ ③ 220V ⟷ ② 120V ⟷ ① 110V
8. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
   ▭ FM monaural signal or AM signal reception
   < > FM stereo signal reception
   ⌐ ⌙ FM muting circuit operating
9. This schematic diagram may be modified at any time with the development of new technology.

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

BOTTOM VIEWS



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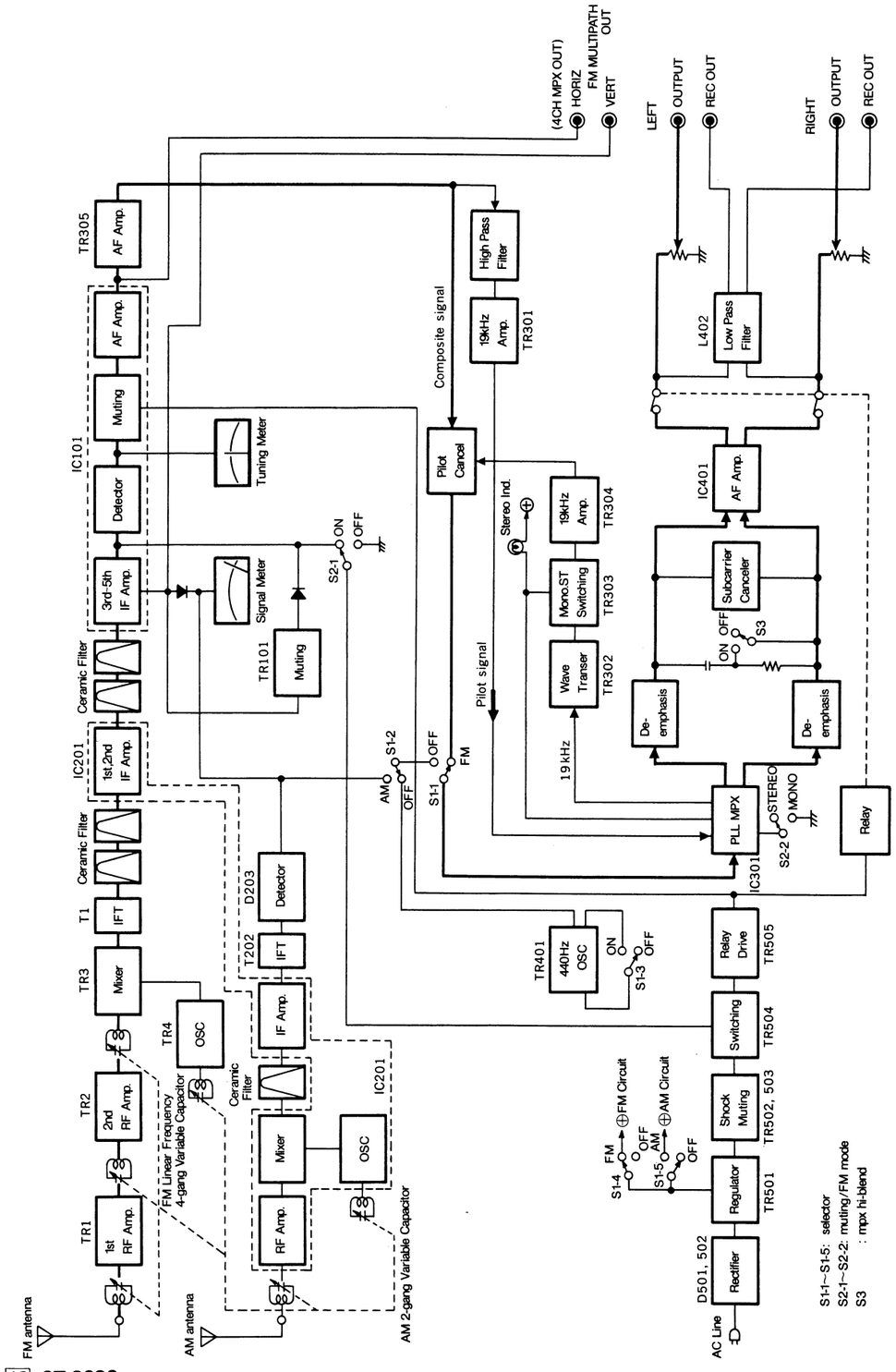
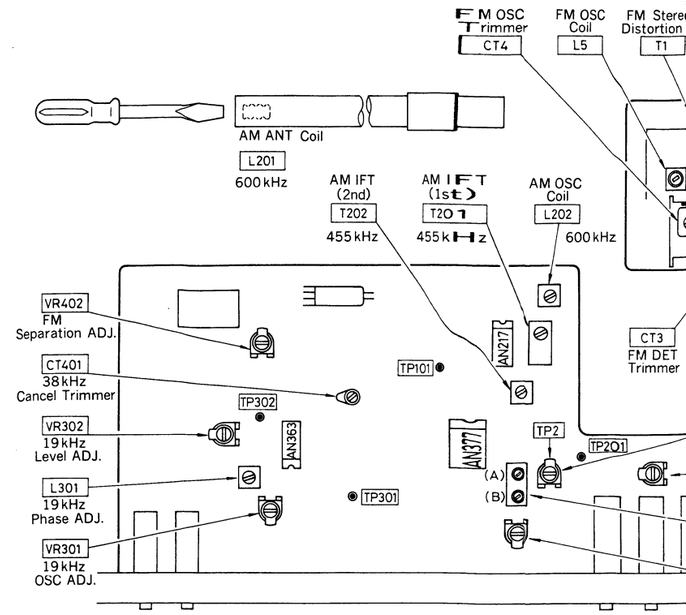
■ BLOCK DIAGRAM



■ ALIGNMENT POINTS



TP1	AM IF input point	TP2	FM output point
TP201	AM output point	TP301	(L+R) (L−R) signal output point

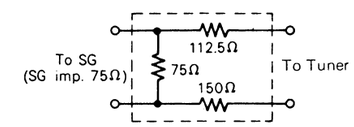


Fig. 4 (Abb. 4)

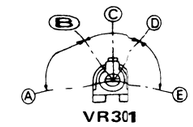


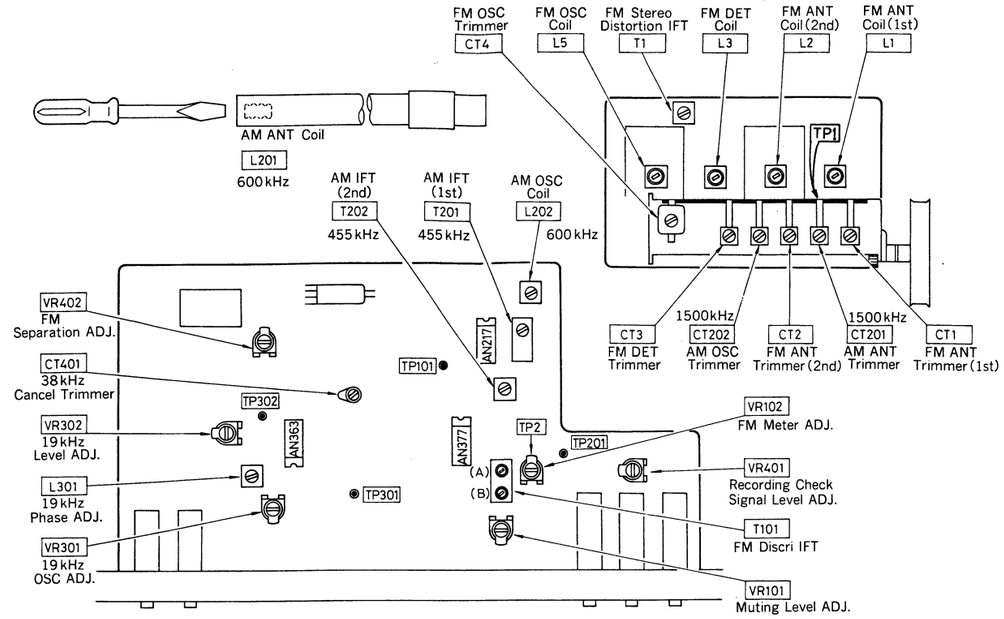
Fig. 5 (Abb. 5)

■ ALIGNMENT INSTRUCTIONS

Notes:
1. Selector switch .... { AM (AM Alignment) / FM (FM Alignment)
2. Muting/FM mode ... off/FM mono
3. Maintain line voltage at rated voltage
4. Output of signal gene to obtain an output r
5. 300Ω FM dummy an

	AM SIGNAL GENERATOR		DIAL SETTING	INDICATOR (VTVM or SCOPE)
	CONNECTION	FREQUENCY		
				AM ALIGNMENT
1	AM signal generator high side through 0.003μF to AM antenna trimmer terminal. (TP1)	455kHz (30% Mod. with 400Hz) [Set for England to 470kHz]	Point of non-inter-ference	Connect VTVM or scope to output terminal (L or R) of set.
2	Fashion loop of several turns of wire and radiate signal into loop of tuner.	600kHz (30% Mod. with 400Hz)	600kHz	Connect VTVM or scope to output terminal (L or R) of set.
3	Fashion loop of several turns of wire and radiate signal into loop of tuner.	1500kHz (30% Mod. with 400Hz)	1500kHz	Connect VTVM or scope to output terminal (L or R) of set.

■ ALIGNMENT POINTS



TP1	AM IF input point	TP2	FM output point
TP101	FM IF output point	TP201	AM output point
TP301	(L+R)(L−R) signal output point	TP302	19kHz output point

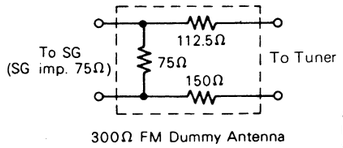
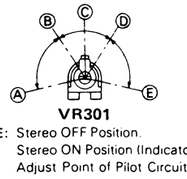


Fig. 4 (Abb. 4)



A – B, D – E: Stereo OFF Position.
B – D: Stereo ON Position (Indicator Lighting).
C: Adjust Point of Pilot Circuit.

Fig. 5 (Abb. 5)

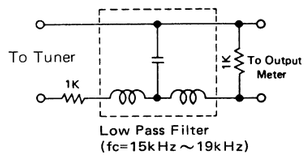


Fig. 6 (Abb. 6)

■ ALIGNMENT INSTRUCTIONS

Notes:
1. Selector switch .... { AM (AM Alignment) / FM (FM Alignment)
2. Muting/FM mode ... off/FM mono
3. Maintain line voltage at rated voltage
4. Output of signal generator should be no higher than necessary to obtain an output reading
5. 300Ω FM dummy antenna ..... Refer to fig. 4

	AM SIGNAL GENERATOR CONNECTION	AM SIGNAL GENERATOR FREQUENCY	DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
	AM ALIGNMENT					
1	AM signal generator high side through 0.003μF to AM antenna trimmer terminal. (TP1)	455kHz (30% Mod. with 400Hz) [Set for England to 470kHz]	Point of non-inter-ference	Connect VTVM or scope to output terminal (L or R) of set.	T201 (1st IFT) T202 (2nd IFT)	Adjust for maximum output.
2	Fashion loop of several turns of wire and radiate signal into loop of tuner.	600kHz (30% Mod. with 400Hz)	600kHz	Connect VTVM or scope to output terminal (L or R) of set.	L202 (OSC Coil) L201 (ANT Coil)	Adjust for maximum output. Adjust ferrite core of L201 by screw driver.
3	Fashion loop of several turns of wire and radiate signal into loop of tuner.	1500kHz (30% Mod. with 400Hz)	1500kHz	Connect VTVM or scope to output terminal (L or R) of set.	CT202 (OSC Trimmer) CT201 (ANT Trimmer)	Adjust for maximum output. Repeat steps (2) and (3)

	FM SIGNAL GENERATOR CONNECTION	FM SIGNAL GENERATOR FREQUENCY	DIAL SETTING	INDICATOR (VTVM or SCOPE) (DISTORTION METER)	ADJUSTMENT POINTS	REMARKS
	FM IF ALIGNMENT					
4		No signal	Point of non-inter-ference	Tuning meter of set	T101 (Discri IFT) Primary [A]	Adjust for center of tuning meter indi-cation.
	FM RF ALIGNMENT					
5	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna.	90MHz (100% Mod. with 400Hz)	90MHz	Connect VTVM or scope to TP2 of set	L5 (OSC Coil) L3 (DET Coil) L2 (ANT-2nd Coil) L1 (ANT-1st Coil)	Adjust for maximum output.
6	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna.	106MHz 100% Mod. with 400Hz)	106MHz	Connect VTVM or scope to TP2 of set	CT4 (OSC Trimmer) CT3 (DET Trimmer) CT2(ANT-2nd Trimmer) CT1 (ANT-1st Trimmer)	Adjust for maximum output. Repeat steps (5) and (6).
	FM MONO DISTORTION ALIGNMENT					
7	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM Dummy antenna.	100MHz (100% Mod. with 400Hz)	100MHz	Connect distortion meter to left output terminal of set.	T101 (Discri IF) Secondary [B]	Tuning at 100MHz and adjust for mini-mum distortion. Repeat steps (4) and (7).
	FM SIGNAL METER ALIGNMENT					
8	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna. Apply about 100dB (0.1V)	100MHz (100% Mod. with 400Hz)	100MHz	Signal meter of set.	VR102	Adjust VR102 to about "4.7" on signal meter scale.
	FM MUTING LEVEL ALIGNMENT					
9	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna. Apply 16 dB (6.3μV) to set. SG indication are 28 dB (IHF)	100MHz (100% Mod. with 400Hz)	100MHz	Connect VTVM or scope to output terminal (L or R) or of set.	VR101	Muting/FM mode switch to on/FM auto. Adjust so that output can be obtained.

Notes: 1. Stereo modulator ..... • Connect stereo modulator output to EXT. MOD. terminal of signal generator.
• Pilot signal modulation to "10%"
2. FM signal generator ..... • Frequency approximatery 100MHz
• Output level to "72dB (IHF)" • Modulation mode to "FM"
3. Band selector switch of set to "FM"
4. Muting/FM mode switch to "on/FM auto"

FM STEREO DISTORTION ALIGNMENT

	FM SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE & MOD. RATE	INDICATOR (DISTORTION METER or VTVM)	ADJUSTMENT POINT	REMARKS
10	300Ω FM antenna terminals through FM dummy antenna.	(400Hz 45% Modulation) MODE "L" Pilot signal to "ON"	Connect distortion meter to left output terminal	T1 (FM IFT) VR301	• Tuning at 100MHz. • Adjust VR301 until stereo indicator lights up. • Adjust for minimum distortion of left output. • Adjust steps (4), (7) and (10).

FM MPX PILOT ALIGNMENT

	Using a frequency counter	Using alternate system
11	1 100MHz Non-modulated monaural signal applied to set. 2 Muting/FM mode switch to "on/FM auto". 3 Connect frequency counter to TP302 through resistor (100kΩ). 4 Adjust **VR301** to 19kHz ±30Hz.	1 Apply stereo signal from generator or stereo station to tuner. 2 Adjust **VR301** until stereo indicator lights up. 3 Cement arm of **VR301** as shown in fig. 5.

	FM SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE & MOD. RATE	INDICATOR (AC VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
	PILOT CANCEL CIRCUIT ALIGNMENT				
12	300Ω FM antenna terminals through FM dummy antenna	(400Hz 90% Modulation) MODE "L + R" Pilot signal to "ON"	Connect AC VTVM or scope to TP301.	VR302 L301	• Tuning at 100MHz • Adjust for minimum indi-cation of AC VTVM or scope.
	SUB CARRIER CANCEL CIRCUIT ALIGNMENT				
13	300Ω FM antenna terminals throiugh FM dummy antenna	(400Hz 90% Modulation) MODE "L + R" Pilot signal to "ON"	Connect AC VTVM or scope to output terminals of set.	CT401	• Tuning at 100MHz • Adjust for minimum indication of AC VTVM or scope.

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	FM SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE & MOD. RATE	INDICATOR (AC VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
	STEREO SEPARATION ALIGNMENT				
14	300Ω FM antenna terminals through FM dummy antenna	(1kHz 30% Modulation) MODE "**L**" (and "R") Pilot signal to "ON"	Connect AC VTVM or scope to output terminals through low pass filter. Refer to fig. 6	VR402	• Tuning at 100MHz • Adjust for minimum **right** (and left) output.
	RECORDING CHECK LEVEL OUTPUT ALIGNMENT				
15	1 Muting/FM mode switch to "on/FM auto" 2 Apply 60dB 100MHz (400Hz 90% Mod. MODE "L + R") stereo signal to set. 3 Tuning at 100MHz.		4 AF signal level at OUTPUT terminal should then be 0dB. 5 Reduce recording level check switch to "ON". 6 Adjust **VR401** so that the output is then 6dB less than the previous output.		

■ ABGLEICHANWEISUNGEN (Für Deutshland)

Anmerkungen:
1. Bereichsschalter ..... { AM (AM Abgleich) / FM (FM Abgleich)
2. Muting/ FM mode Schalter off/ FM mono
3. Die Netzspannung auf ihren Sollwert einstellen.
4. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.
5. UKW-Kunstantenne, 300 ohm ..... Vgl. Abb. 4.

	AM/ UKW MESSENDER		SKALENZEIGEREINSTELLUNG DES TUNER	ANZEIGE (Röhrenvoltmeter order Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHSPUNKTE	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
	AM-ABGLEICH					
1	Heißes Ende des Meßsenders über einen 0.033μF Kondensator an den AM-Antenneneingang schließen. (TP1) Kaltes Ende an Masse.	455kHz (400Hz Modulat., 100%)	Kein Empfang	Röhrenvoltmeter oder Oszillograph an den Tuner-Ausgang schließen, (L order R)	T201 (1. IFT) T202 (2. IFT)	Auf max. Ausgang abgleichen.
2	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	600kHz (400Hz Modulat., 30%)	600kHz	Röhrenvoltmeter oder Oszillograph an den Tuner-Ausgang schließen. (L order R)	L202 (Osc. Spule) L201 (Ant. Spule)	Auf max. Ausgang abgleichen. Den Ferritkern von L201 mit einem Schraubendreher justieren.
3	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1500kHz (400Hz Modulat., 30%)	1500kHz	Röhrenvoltmeter oder Oszillograph an den Tuner-Ausgang schließen (L order R)	CT202 (Osc. Trimmer) CT201 (Ant. Trimmer)	Auf max. Ausgang abgleichen; Schritte (2) und (3) sind zu wiederholen.
	UKW ZF-ABGLEICH					
4		Kein Signal	Kein Empfang	Abstimmungsanzeiger des Geräts	T101 (Diskriminator IFT) [A]	Den Abstimmungsanzeiger auf den zentrum Wert einstellen.
	UKW HF-ABGLEICH					
5	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	87.5MHz (400Hz Modulat., 100%)	87.5MHz (Frequenz min.)	Röhrenvoltmeter oder Oszillograph an TP2 schließen	L5 (Osc. Spule)	Auf max. Ausgang abgleichen.
6	Meßsender üder eine Kunstantenne an den UKW-Antenneneingang schließen.	90MHz (400Hz Modulat., 100%)	90MHz	Röhrenvoltmeter oder Oszillograph an TP2 schließen.	L3 (Det. Spule) L2 (Ant.-2. Spule) L1 (Ant.-1. Spule)	Auf max. Ausgang abgleichen.
7	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106MHz (400Hz Modulat., 100%)	106MHz	Röhrenvoltmeter oder Oszillograph an TP2 schließen.	CT4(Osc.Trimmer) CT3(Det.Trimmer) CT2(Ant.-2.Trimmer) CT1(Ant.-1.Trimmer)	Auf max. Ausgang abgleichen. Schritte (5) , (6) und (7) sind zu wiederholen.
	ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
8	Meßsender über eine kunstantenne an den UKW-Antenneneingang schließen	100MHz (400Hz Modulat., 100%)	100MHz	Klirrfaktor-Meßbrücke über linker Tuner-Ausgang anschließen.	T101 (Diskriminator IFT) [B]	Auf min. Verzerrung auf der Klirrfaktor-Meßbürcke abgleichen Schritt (4) und (8) sind zu wiederholen.
	UKW-FELDSTÄRKEANZEIGE-ABGLEICH					
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender für 100dB (IHF) (ca. 100mV) einstellen.	100MHz (400Hz Modulat., 30%)	100MHz	Feldstärkenanzeige	VR102	VR102 auf ca. 4,7 der Feldstärkeanzeige einstellen.
	UKW-MUTING-ABGLEICH					
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender auf 16 dB (6.3μV) einstellen.	100MHz (400Hz Modulat., 100%)	100MHz	Röhrenvoltmeter oder Oszillograph an den Tuner-Ausagang schließen.	VR101	(FM-Muting-Schalter auf "on/ FM auto"] So einstellen, daß ein Ausgang zu vernehmen ist.

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Anmerkungen:

1. Stereo-Modulator ..... • Ansgang des Stereo-Modulators an den Eingang EXT. MOD. des Meßsenders schließen.
   • Pilotton-Modulation 10%
2. UKW Meßsender ..... • Auf etwa 100MHz einstellen
   • Ausgangspegel 72dB (1HF). Modulation FM
3. Wellenbereichsumschalter ..... FM
4. Muting/ FM mode schalter ..... on/ FM auto

ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-STEREO

	ANSCHLUSS DES UKW MESSENDERS	STEREO MODULATOR MODE oder MOD. RATE	ANZEIGE Klirrfaktor-Meßbrücke oder Röhrenvoltmeter)	ABGLEICHS-PUNKTE	ANMERKUNGEN
11	Meßsender über Kunstantenne an den UKW-Antenneneingang schließen.	(400Hz, 45% Modulation) Betriebsart "L" Pilotsignal auf "ON"	Verzerrungsmesser an linken Kanal anschließen	T1 (FM ZFT) VR301	• Auf 100MHz abstimmen. • VR301 abgleichen, bis Stereoanzeiger aufleuchtet. • Für minimale Verzerrung des linken Ausgangs abgleichen. • Punkte (4), (8) und (11) abgleichen.

UKW STEREO-DEKODER-ABGLEICH

	Unter Verwendung eines Zählers	Alternativ-Meßmethode
12	1 Unmoduliertes Mono-Signal 100MHz in das Gerät speisen. 2 Muting/FM mode-Schalter auf "on/FM auto" stellen. 3 Zähler über einen Widerstand 100Kohm an TP302 schließen. 4 **VR301** auf 19kHz ±30Hz einstellen.	1 Stereosignal entweder von einem Stereogenerator oder einem Sender einspeisen. 2 **VR301** so einstellen, bis die Stereolampe auf leuchtet. 3 Schleifer von **VR301** sichern, wie in Abb. 5 gezeigt.

	ANSCHLUSS DES UKW MESSENDERS	STEREO MODULATOR MODE oder MOD. RATE	ANZEIGE (Röhrenvoltmeter oder Oszillograph)	ABGLEICHS-PUNKTE	ANMERKUNGEN
	ABGLEICHEN DER PILOT-KOMPENSATIONS-SCHALTUNG				
13	300 Ω Antennen-Anschlüsse durch FM Ersatzantenne	(400Hz, 90% Modulation) Betriebsart "L+R" Pilotsignal auf "ON"	Röhrenvoltmeter oder Oszilloskop an TP301 anschließen.	VR302 L301	• Auf 100MHz abstimmen • Auf minimale Anzeige des Röhrenvoltmeters oder Oszilloskops abgleichen.
	ABGLEICHEN DER HILFSTRÄGER KOMPENSATIONS-SCHALTUNG				
14	300 Ω Antennen-Anschlüsse durch FM Ersatzantenne	(400Hz, 90% Modulation) Betriebsart "L + R" Pilotsignal auf "ON"	Röhranvoltmeter oder Oszilloskop an Ausgangsanschlüsse des Gerätes anschließen	CT401	• Auf 100MHz abstimmen • Auf minimale Anzeige des Röhrenvoltmeters oder Oszilloskops abgleichen.
	ABGLEICHEN DER STEREO-TRENNUNG				
15	300Ω Antennen-Anschlüsse durch FM Ersatzantenne	(1kHz, 30% Modulation) Betriebsart "**L**" (und "R") Pilotsignal auf "ON"	Röhrenvoltmeter oder Oszilloskop durch Tiefpaßfilter an Ausgangsanschlüsse des Gerätes anschließen. (Siehe Abb. 6.)	VR402	• Auf 100MHz abstimmen • Auf minimalen **rechten** (und linken) Ausgang abgleichen.

ABGLEICHEN DES AUSSTEUERUNGSKONTROLL-AUSAANGS

16	1 Dämpfungs-/FM-Betriebsartschalter auf "on/FM auto" stellen. 2 60dB 100MHz (400Hz, 90% Modulation) Stereosignal zuführen. 3 Auf 100MHz abstimmen.	4 NF-Signalpegel an OUTPUT-Anschluß sollte dann 0dB betragen. 5 Aufnahmepegel-Kontrollschalter auf "ON" stellen. 6. VR401 so einstellen, daß der Ausgang 6dB weniger als der vorherige Ausgang beträgt.

■ INSTRUCTIONS D'ALIGNEMENT

Notes:

1. Commutateur de gamme .... {AM (Alignement AM) / FM (Alignement FM)
2. Commutateur de silencieux... off/FM mono
3. Conserver la tension du secteur à la tension nominale:
4. Le signal de sortie du générateur ne doit pas être plus élevé que nécessaire à la lecture en sortie de làppareil.
5. Antenne fictive FM 300 ..... Voir fig. 4.

	AM/FM GENERATEUR		AIGUILLE SUR LE CADRAN	INDICATEUR (VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIOMÉTRE)	POINTS DE REGLAGE	OBSERVATIONS
	BRANCHEMENT	FREQUENCE				
	ALIGNEMENT AM					
1	Côté chaud à travers 0.033μF, sur le trimmer de l'antenne AM (TP1), commum an shâssis.	455kHz (modulé à 30% par 400Hz)	Point sans signal	Voltmètre électronique ou oscilloscope sur prise de l'appareil.	T201 (1 transfo F1) T202 (2 transfo F1)	Réglez au maximum de signal de sortie.
2	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du tuner.	600kHz (modué à 30% par 400Hz)	600kHz	Voltmètre électronique ou oscilloscope sur prise de l'appareil.	L202 (bobine OSC) L201 (bobine ANT)	Réglez au maximum de sortie. Régler le noyau ferrite de L201 à l'aide d'un tournevis.
3	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du tuner.	1500kHz (modulé à 30% par 400Hz)	1500kHz	Voltmètre électronique ou oscilloscope sur prise de l'appareil.	CT202 (trimmer OSC) CT201 (trimmer ANT)	Réglez au maximum de signal de sortie. Recommencez les étapes (2) et (3).
	ALIGNEMENT FI-FM					
4		Sans signal	Point sans signal	Indicateur d'accord de l'appareil	T101 (Transfo F1 discri.) [A]	Réglez pour atteinde position médiane sur l'indicateur d'accord.

ALIGNEMENT RF-FM

5	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	90MHz (modulé à 100% par 400Hz)	90MHz	Voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	L5 (bobine OSC) L3 (bobine DET) L2 (bobine ANT-2) L1 (bobine ANT-1)	Réglez au maximum de signal de sortie.
6	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	106MHz (modulé à 100% par 400Hz)	106MHz	Voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	CT4 (trimmer OSC) CT3 (trimmer DET) CT2 (trimmer ANT-2) CT1 (trimmer ANT-1)	Réglez au maximum de signal de sortie. Recommencez les étapes (5) et (6)

REGLAGE DE LA DISTORSION FM MONO

7	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	100MHz (modulé à 100% par 400Hz)	100MHz	Distorsiométre sur prise de sortie du tuner.	T101 (Transfo F1 discri.) [B]	Réglez au minimum d'indication du distorsiomètre. Recommencez les étapes (4) et (7)

REGLAGE DE L'INDICATEUR D'ACCORD FM

8	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 100dB (0.1V)	100MHz (modulé à 100% par 400Hz)	100MHz	Indicateur d'intensité du tuner	VR102	Réglez VR102 pour obtenir env. "4.7" points sur l'échelle d'intensité.

REGLAGE DU SEUIL DU SILENCIEUX D'ACCORD

9	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 16 dB (6.3μV)	100MHz (mOdulé à (100% par 400Hz)	100MHz	Voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil. (De gauche à droite)	VR101	Avec le commutateur de silencieux sur ON Régler pour obtenir une lecture en sortie.

Notes: .1. Modulateur stéréo ..... • Branchez sa sortie sur la prise EXT. MOD. du générateur.
• Modulation du signal pilote 10%
2. Générateur de signal .... • Fréquence env. 100MHz, niveau de sortie 72dB (IHF), genre de modulation sur FM
3. Commutateur de gamme.... FM
4. Commutateur de silencieux...on/FM auto

REGLAGE DE LA DISTORSION FM STEREO

	BRANCHEMENT DU GENERATEUR DE SIGNAL	MODE DU MODULATEUR STEREO ET TAUX DE MODULATION	INDICATEUR (Distorsiometre ou Voltmetre electronique)	POINTS DE REGLAGE	OBSERVATIONS
10	Branchez sur la prise d'antenne FM a travers une antenne fictive FM.	(Modulation de 45% à 400Hz) Mode "L" (Gauche) Signal pilote sur "ON" (Marche).	Brancher le distorsiomètre à la borne de sortie gauche.	T1 (Transformateur de fréquences intermédiaires FM). VR301	• Accorder à 100 MHz. • Ajuster VR301 jusqu'à ce que l'indicateur stéréo s'allume. • Ajuster pour une déviation minimum de la puissance de sortie gauche. • Régler les ètapes (4), (7) et (10)

ALIGNEMENT DU PILOTE MULTIPLEX FM

	Avec un fréquencemètre	Par un outre systéme
11	1. Signal mono 98MHz non modulé appliqué à l'appareil. 2. Commutateur de silencieux sur" on/FM auto". 3. Branchez le fréquencemètre sur **TP302** a travers une résistance de 100kΩ. 4. Réglez **VR301** sur 19kHz ± 30Hz.	1. Appliquez à l'appareil un signal stéréo provenant d'un générateur ou de la réception d'un émetteur. 2. Réglez **VR301** jusqu à ce que l'indicateur de stéréophonie s'allume. Collez le curseur de **VR301** commé indiqué sur la fig. 5.

ALIGNEMENT DU CIRCUIT D'ANNULATION PILOTE

12	Bornes d'antenne FM de 300Ω par l'intermédiaire d'une antenne artificielle.	(Modulation de 90% à 400Hz.) Mode "L+R' (Gauche + Droite). Signal pilote sur "ON" (Marche).	Brancher un voltmètre électronique C.A. ou un oscilloscope à TP301.	VR302 L301	• Accorder à 100MHz • Ajuster pour une indication minimum du voltmètre électronique C.A. ou de l'oscilloscope.

ALIGNEMENT DU CIRCUIT D'ANNULATION DES SOUS-PORTEUSES

13	Bornes d'antenne FM de 300Ω par l'intermédiaire d'une antenne artificielle.	(Modulation de 90% à 400Hz) Mode "L+R" (Gauche + Droite). Signal pilote sur "ON" (Marche).	Brancher un voltmètre électronique C.A. ou un oscilloscope aux bornes de sortie de l'appareil.	CT401	• Accorder à 100MHz. • Ajuster pour une indication minimum du voltmètre électronique C.A. ou de l'oscilloscope.

ALIGNEMENT DE SEPARATION STEREO

14	Bornes d'antenne FM de 300 Ω par l'intermédiaire d'une antenne artificielle.	(Modulation de 30% à 1kHz) Mode "**L**" –gauche– (et "R" -droite-). Signal pilote sur "ON" (marche).	Brancher un voltmètre électronique C.A. ou un oscilloscope aux bornes de sortie, par l'intermédiaire du filtre passe-bas. Se référer à la Fig. 6.	VR402	• Accorder à 100MHz. • Régler à la puissance de **droite** (et de gauche) minimum.

ALIGNEMENT DE LA PUISSANCE DU NIVEAU DE CONTROLE D'ENREGISTREMENT

15
1 Commutateur de mode FM/Réglage silencieux sur "ON/FM auto".
2 Appliquer un signal stéréo (Mode de modulation de 90% à 400Hz "L+R"–gauche + droite) à l'appareil.
3 Accorder à 100MHz.
4. Le niveau de transmission d'audiofréquences (AF) à la borne de SORTIE sera 'alors de 0dB
5. Baisser le commutateur de contrôle du niveau d'enregistrement sur "ON" (marche).
6. Ajuster VR401, de façon à ce que la puissance de sortie soit alors de 6dB inférieure à la précédente.

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■ REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

NOTE: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
INTEGRATED CIRCUITS				
IC101	AN377	IC, FM IF Amplifier & Detector	1	
IC201	AN217-BB	IC, FM 1F Amplifier & AM Converter	1	
IC301	AN363A	IC, MPX PLL Demodulator	1	
IC401	SVINJM4558DS	IC, AF Amplifier	1	
TRANSISTORS				
TR1, 2	2SK49-H2	Transistor, FM RF Amplifier	2	
TR3	2SC1674-M	Transistor, FM Mixer	1	
TR4	2SC1675-L1	Transistor, FM Local OSC	1	
TR101,301,302, 303,304,305, 401,502,503, 504	**2SC945-P1**	Transistor, Muting & Switching	10	
TR501	**2SC1398-Q**	Transistor, Regulator (Use in ranks P or Q)	1	
TR505	**2SC1384A-Q**	Transistor, Relay Drive Amplifier	1	
DIODES				
D101,102,103, 201,202,504, 505	MA150	Diode, Switching	7	
D104	SVDKB262E	Diode, Switching	1	
D203	OA99	Diode, AM Detector	1	
D301	SVDMA26-2	Diode, Auto Operation Control	1	
D501,502	SVD10E1	Rectifier	2	
D503	MA1130A	Zener Diode, Stabilizer	1	
COILS and TRANSFORMERS				
L1,2,3	SLA4P29	Antenna Coil, FM	3	O
L4	ELQ5A9	Coil, Choke	1	
L5	SLO4P31	Oscillator Coil, FM	1	
L6,7	RLQY25S5	Coil, Choke	2	
L8	SLAA4W1-3	Coil, Balun	1	
L101	SLQX180-1	Coil, Choke	1	
L201	SLF2D39	Coil, AM Antenna (Except Set for [XE])	1	
L201 [XE] only	SLF2D43	Coil, AM Antenna	1	O
L202	SLO2C5-Z	Oscillator Coil, AM	1	
L301	SLM1C37-Z	Coil, 19kHz Filter	1	
L401	SLQW204-1Z	Coil, Choke	1	
L402	SLMA1Z3-K	Coil, Low Pass Filter	1	
T1	SLIA4C101	IFT, FM 1st	1	
T101	SLI4D513	IFT, FM Discriminator	1	
T201 [XE] only	SLI7D103-M	IFT, AM 1st	1	O
T201	SLI7D101-M	IFT, AM 1st (Except set for [XE])	1	
T202	RLI2C450	IFT, AM 2nd	1	
T501	SLT5L145	Power Transformer (Except Set for [XAL])	1	O
T501 [XAL] only	SLT5L147	Power Transformer	1	O
CERAMIC FILTERS				
CF101	SVFE107MS8A	Ceramic Filter, Red, 10.7MHz	each 1	
	SVFE107MS8B	Ceramic Filter, Blue, 10.67MHz		
	SVFE107MS8C	Ceramic Filter, Orange, 10.73MHz		
	SVFE107MS8D	Ceramic Filter, Black, 10.64MHz		
	SVFE107MS8E	Ceramic Filter, White, 10.76MHz		

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
CF102,103,104	SVFE107MA8A	Ceramic Filter, Red, 10.7MHz	each 3	
	SVFE107MA8B	Ceramic Filter, Blue, 10.67MHz		
	SVFE107MA8C	Ceramic Filter, Orange, 10.73MHz		
	SVFE107MA8D	Ceramic Filter, Black, 10.64MHz		
	SVFE107MA8E	Ceramic Filter, White, 10.76MHz		
	(Use pair ranks as same as CF101, CF102, CF103 and CF104)			
RESISTORS				
R1	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R3	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ±5%	1	
R4	**ERD25TJ104**	Carobn, 100kΩ, 1/4W, ±5%	1	
R6	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ±5%	1	
R7	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%	1	
R8	**ERD25TJ822**	Carbon, 8.2kΩ, 1/4W, ±5%	1	
R9	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R10	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ±5%	1	
R11	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%	1	
R12	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R13	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R14	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R15	**ERD18FJ101**	Carbon, 100Ω, 1/8W, ±5%	1	
R16	**ERD25TJ470**	Carbon, 47Ω, 1/4W, ±5%	1	
R17	**ERD25TJ470**	Carbon, 47Ω, 1/4W, ±5%	1	
R101	**ERD25TJ470**	Carbon, 47Ω, 1/4W, ±5%	1	
R102	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ±5%	1	
R103	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ±5%	1	
R104	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R105	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R106	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ±5%	1	
R107	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R108	**ERD18FJ470**	Carbon, 47Ω, 1/8W, ±5%	1	
R109	**ERD25TJ562**	Carbon, 5.6kΩ, 1/4W, ±5%	1	
R110	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ±5%	1	
R111	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R112	**ERD25TJ822**	Carbon, 8.2kΩ, 1/4W, ±5%	1	
R113	**ERD25TJ221**	Carbon, 220Ω, 1/4W, ±5%	1	
R114	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R115	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R116	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R117	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R118	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ±5%	1	
R119	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R120	**ERD25TJ273**	Carbon, 27kΩ, 1/4W, ±5%	1	
R121	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R122	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ±5%	1	
R123	**ERD25TJ271**	Carbon, 270Ω, 1/4W, ±5%	1	
R201	**ERD25TJ152**	Carbon, 1.5kΩ, 1/4W, ±5%	1	
R202	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ±5%	1	
R203	**ERD25TJ562**	Carbon, 5.6kΩ, 1/4W, ±5%	1	
R204	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ±5%	1	
R205	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R206	**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ±5%	1	
R208	**ERD25TJ272**	Carbon, 2.7kΩ, 1/4W, ±5%	1	
R209	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R210	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ±5%	1	
R301	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R302	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ±5%	1	
R303	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ±5%	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R304	**ERD18FJ101**	Carbon, 100Ω, 1/8W, ±5%	1	
R305	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R306	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R307	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R308	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R309	**ERD18FJ101**	Carbon, 100Ω, 1/8W, ±5%	1	
R310	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ±5%	1	
R311	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R312	**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ±5%	1	
R313	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R314	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R315	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ±5%	1	
R316	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R317	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R318	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R319	**ERD25TJ474**	Carbon, 470kΩ, 1/4W, ±5%	1	
R320	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ±5%	1	
R321	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R322	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R323	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ±5%	1	
R324	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%	1	
R325	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R326	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R327	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ±5%	1	
R328	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R402	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%	1	
R403	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%	1	
R404	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ±5%	1	
R405	**ERD25TJ123**	Carbon, 12kΩ, 1/4W, ±5%	1	
R406	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R407	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ±5%	1	
R408	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R409	**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ±5%	1	
R411	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ±5%	1	
R412	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ±5%	1	
R413	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ±5%	1	
R414	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ±5%	1	
R415	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R416	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R417	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R418	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ±5%	1	
R419	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R420	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R421	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ±5%	1	
R422	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ±5%	1	
R423	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R424	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R425	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ±5%	1	
R426	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ±5%	1	
R427	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R428	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R429	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R430	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ±5%	1	
R502	ERD12FJ820	Carbon, 82Ω, 1/2W, ±5%	1	
R503	ERD12FJ820	Carbon, 82Ω, 1/2W, ±5%	1	
R504	**ERD25TJ122**	Carbon, 1.2kΩ, 1/4W, ±5%	1	
R505	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ±5%	1	

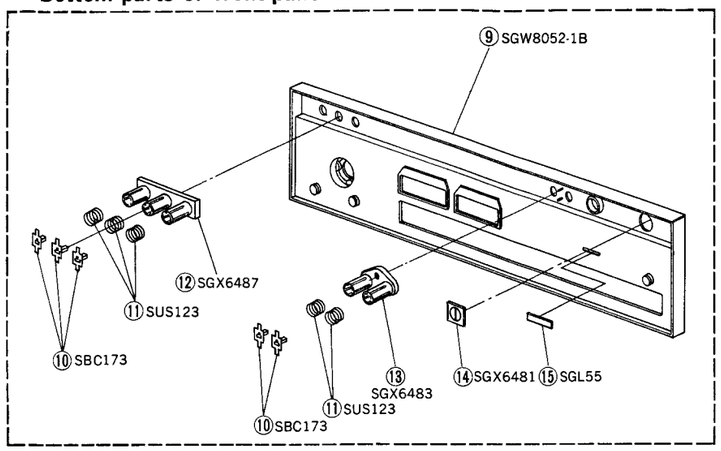
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R506	**ERD25TJ124**	Carbon, 120kΩ, 1/4W, ±5%	1	
R507	**ERD25TJ684**	Carbon, 680kΩ, 1/4W, ±5%	1	
R508	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ±5%	1	
R509	**ERD25TJ393**	Carbon, 39kΩ, 1/4W, ±5%	1	
R510	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
R511	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ±5%	1	
R512	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ±5%	1	
R513	**ERD50TJ222**	Carbon, 2.2kΩ, 1/4W, ±5%	1	
R514	**ERG1ANJ331**	Carbon, 330Ω, 1/4W, ±5%	1	
R515	**ERD50TJ102**	Carbon, 1kΩ, 1/4W, ±5%	1	
R516	**ERD18FJ2R2**	Carbon, 2.2Ω, 1/8W, ±5%	1	
R517	**ERD25TJ682**	Carbon, 6.8kΩ, 1/4W, ±5%	1	
R518	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ±5%	1	
R570	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ±5%	1	
		VARIABLE RESISTORS		
VR101	**EVLS3AA00B54**	Muting Level Adjustment, 50kΩ (B)	1	
VR102	**EVLS3AA00B24**	Meter Adjustment, 20kΩ (B)	1	
VR301	EVTS3AA00B14	PLL VCO Adjustment, 10kΩ(B)	1	
VR302	**EVLS3AA00B15**	19KHz Level Adjustment, 100kΩ (B)	1	
VR401	**EVLS3AA00B55**	Rec Level Adjustment, 500kΩ (B)	1	
VR402	**EVLS3AA00B54**	Separation Adjustment, 50kΩ (B)	1	
VR403,404	EWFNWA023A14	Output Level Volume Control, 10kΩ(A)	1	
		CAPACITORS		
C1	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C2	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF	1	
C3	ECCD1H120KC	Ceramic, 12pF, 50V, ±10%	1	
C4	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C5	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C6	ECKD1H102PF	Ceramic, 0.001μF, 50V, +100% −0%	1	
C7	ECCD1H120KC	Ceramic, 12pF, 50V, ±10%	1	
C8	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C9	ECCD1H100KC	Ceramic, 10pF, 50V, ±10%	1	
C10	ECCD1H010CC	Cermaic, 1pF, 50V, ±0.25pF	1	
C11	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C12	ECCD1H331KC	Ceramic, 330pF, 50V, ±10%	1	
C13	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C14	ECKD1H103PF	Ceramic, 0.01μF, 50V, +100% −0%	1	
C15	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C16	ECCD1H100KT	Ceramic, 10pF, 50V, ±10%	1	
C17	ECCD1H390KC	Ceramic, 39pF, 50V, ±10%	1	
C18	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C19	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C20	ECKD1H102PF	Ceramic, 0.001μF, 50V, +100% −0%	1	
C21	ECCD1H100KC	Ceramic, 10pF, 50V, ±10%	1	
C22	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C23	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C25	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C101	ECKD1H103PF	Ceramic, 0.01μF, 50V, +100% −0%	1	
C102	ECKD1H103PF	Ceramic, 0.01μF 50V, +100% −0%	1	
C103	ECKD1H223PF	Cermaic, 0.022μF, 50V, +100% −0%	1	
C104	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C105	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C106	ECEA50VR47	Electrolytic, 0.47μF, 50V	1	
C107	ECCD1H680KC	Ceramic, 68pF, 50V, ±10%	1	
C108	ECEA16V10	Electrolytic, 10μF, 16V	1	
C109	ECKD1H103PF	Ceramic, 0.01μF 50V, +100% −0%	1	

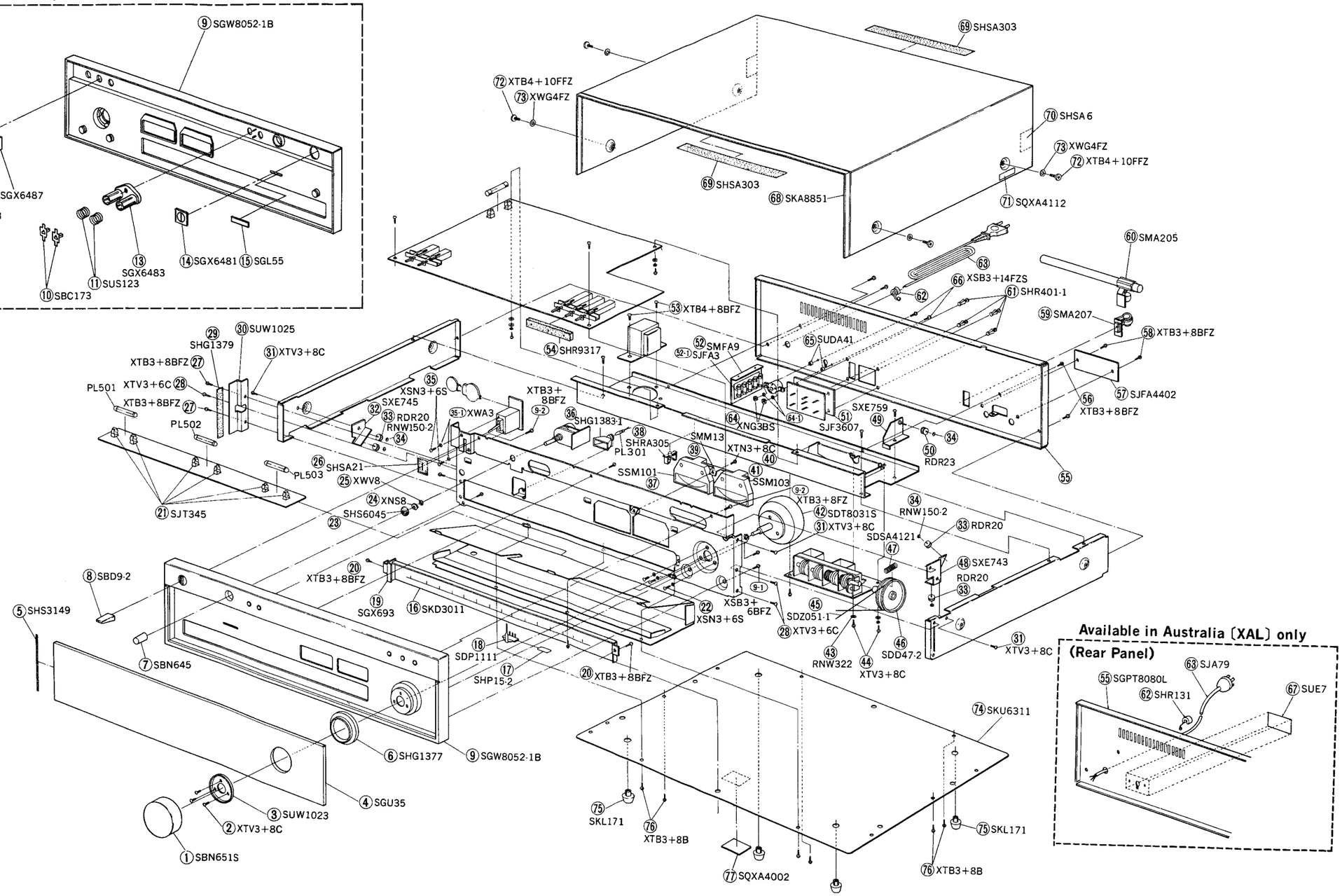
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C110	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C111	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C112	ECEA16V10	Electrolytic, 10μF, 16V	1	
C113	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C114	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C116	ECEA50V1	Electrolytic, 1μF, 50V	1	
C117	ECEA50VR47	Electrolytic, 0.47μF 50V	1	
C118	**ECEA6V220**	Electrolytic, 220μF, 6.3V	1	
C119	ECQM1H333KZ	Polyester, 0.033μF, 50V, ±10%	1	
C201	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C202	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%	1	
C203	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%	1	
C204	ECCD1H180KC	Ceramic, 18pF, 50V, ±10%	1	
C205	ECQS05361JZG	Polystyrene, 360pF, 50V, ±5%	1	
C206	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C207	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF	1	
C208	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C209	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C210	ECCD1H101K	Ceramic, 100pF, 50V, ±10%	1	
C211	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C212	ECKD1H223PF	Ceramic, 0.022μF, 50V, +100% −0%	1	
C213	ECQM1H333KZ	Polyester, 0.033μF, 50V, ±10%	1	
C214	ECKD1H103PF	Ceramic, 0.01μF, 50V, +100% −0%	1	
C301	ECQM1H123JZ	Polyester, 0.012μF, 50V, ±5%	1	
C302	ECQM1H123JZ	Polyester, 0.012μF, 50V, ±5%	1	
C303	ECEA16V47	Electrolytic, 47μF, 16V	1	
C304	ECEA16V10	Electrolytic, 10μF, 16V	1	
C305	ECEA16V47	Electrolytic, 47μF, 16V	1	
C306	ECQS05471JZ	Polystyrene, 470pF, 50V, ±5%	1	
C307	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1	
C308	ECEA50VR47	Electrolytic, 0.47μF, 50V	1	
C309	ECEA50VR47	Electrolytic, 0.47μF, 50V	1	
C310	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1	
C311	ECEA50MR47R	Electrolytic, 0.47μF, 50V	1	
C312	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1	
C313	ECQM1H562JZ	Polyester, 0.0056μF, 50V, ±5%	1	
C314	ECEA16V10	Electrolytic, 10μF, 16V	1	
C315	ECEA16V10	Electrolytic, 10μF, 16V	1	
C316	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1	
C317	ECEA16V10	Electrolytic, 10μF, 16V	1	
C318	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1	
C319	ECEA16V10	Electrolytic, 10μF, 16V	1	
C320	ECQM1H103KZ	Polyester, 0.01μF, 50V ±10%	1	
C401	ECQM1H472JZ	Polyester, 0.0047μF, 50V, ±5%	1	
C402	ECQM1H472JZ	Polyester, 0.0047μF, 50V, ±5%	1	
C403	ECEA16V47	Electrolytic, 47μF, 16V	1	
C404	ECQM1H223KZ	Polyester, 0.022μF, 50V, ±10%	1	
C405	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C406	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1	
C407	ECCD1H560KC	Ceramic, 56pF, 50V, ±10%	1	
C409	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C410	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C411	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C412	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C501	ECNC4A103M	Paper, 0.01μF, 450VAC, ±20%	1	
C502	**ECEA16V1000V**	Electrolytic, 1000μF, 16V	1	
C503	**ECEA16V1000V**	Electrolytic, 1000μF, 16V	1	

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
C504	**ECEA25V470V**	Electrolytic, 470μF, 25V	1	
C505	**ECEA16V470V**	Electrolytic, 470μF, 16V	1	
C506	ECEA35V3R3	Electrolytic, 3.3μF, 35V	1	
C507	ECEA16V33	Electrolytic, 33μF, 16V	1	
C509	ECEA35V4R7	Electrolytic, 4.7μF, 35V	1	
C510	ECEA35V4R7	Eelctrolytic, 4.7μF, 35V	1	
C511	ECNC4A103M	Paper, 0.01μF, 450VAC, ±20%	1	
C512[XAL] only	ECKDHS101MB	Ceramic, 100pF, 400VAC, ±20%	1	
C513[XAL] only	ECKDHS101MB	Ceramic, 100pF, 400VAC, ±20%	1	
C514[XAL] only	ECKDHS102MD	Ceramic, 0.001μF 400VAC, ±20%	1	
		VARIABLE CAPACITORS		
CV1~4,201,202	SVCCV65J118	Tuning Capacitor, FM/AM	1	
CT401	ECV1ZW30X32	Trimmer Capacitor, Leak Carrier	1	
		LAMPS		
PL301	XAMR38S150	Lamp, Stereo Indicator, 6.3V 40mA	1	
PL501,502,503	XAMR59P	Lamp, Dial & Meter Lamp 6.3V 250mA	3	
		FUSES		
F501	XBA2C01TR0	Fuse, 100mAT (250V), Power Source	1	
F502	XBA2C01TR0	Fuse, 100mAT (250V), Power Source (Except set for [XAL])	1	
F503	XBA2C02TR0	Fuse, 200mAT (250V), Power Source (Except set for [XAL])	1	
F504	XBA2C08TR0	Fuse, 800mAT (250V), Power Source	1	
F505	XBA2C10TR0	Fuse, 1AT (250V), Power Source	1	
		SWITCHES		
S1	SSL43S	Switch, Power Source	1	O
S2,3	SSH239S	Switch, Muting/FM mode & MPX Hi-blend	1	
S4,5,6	SSH335S	Switch, Selector	1	
S7	ESE372	Switch, Voltage Selector (Except set for [XAL])	1	
		RELAY		
RLY401	SSY9	Relay, Muting	1	
		COMPONENT COMBINATION		
Z501	RXAF103P22HD	Component Combination, 0.01μF(X2)	1	
		CABINET and CHASSIS PARTS		
1	SBN651S	Knob, Tuning	1	O
2	XTV3+8C	Screw, Front Panel Glass Plate M'tg	3	
3	SUW1023	Bracket, Front Panel Glass Plate	1	*O
4	SGU35	Glass Plate, Front Panel	1	O
5	SHS3149	Paper Cloth, Glass Plate	1	O
6	SHG1377	Rubber, Tuning Shaft	1	
7	SBN645	Knob, Output Level Volume	1	
8	SBD9-2	Button, Power Switch	1	
9	SGW8052-1B	Panel, Front	1	O
9-1	XTB3+6BFZ	Screw, Front Panel M'tg	3	
9-2	XTB3+8BFZ	Screw, Front Panel M'tg	3	
10	SBC173	Button, Push Switch	5	

■ EXPLODED VIEWS

Bottom parts of front panel




⑥⑨SHG1377
⑨SGW8052-1B
③SUW1023
④SGU35
②XTV3+8C
①SBN651S
⑤SHS3149
⑧SBD9-2
⑦SBN645
⑲SGX693
⑯SKD3011
⑱SDP1111
⑰SHP15-2
⑳XTB3+8BFZ
㉒XSN3+6S
㉓SHS6045
㉔XNS8
㉕XWV8
㉖SHSA21
㉑SJT345
PL503
PL502
PL501
㉙SHG1379
㉚SUW1025
㉛XTV3+8C
XTB3+8BFZ㉗
XTV3+6C㉘
XTB3+8BFZ㉗
㉜SXE745
㉝RDR20
RNW150-2㉞
㉟XSN3+6S
㉟-①XWA3
⑨-②XTB3+8BFZ
㊱SHG1383-1
㊳SHRA305
PL301
㊴SMM13
㊵XTN3+8C
㊶SSM103
SSM101㊲
⑨-②XTB3+8FZ
㊷SDT8031S
㉛XTV3+8C
㉞RNW150-2
㉝RDR20
SDSA4121㊼
㊽SXE743
RDR20
㉝
⑨-①XSB3+6BFZ
㉒XSN3+6S
㊺SDZ051-1
㉘XTV3+6C
㊸RNW322
㊹XTV3+8C
㊻SDD47-2
㉛XTV3+8C
㉗XTB3+8BFZ
㊲SSM101
㊴SMM13
㊵XTN3+8C
㊶SSM103
⑨-②XTB3+8FZ
㊷SDT8031S
㉛XTV3+8C
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㊺SDZ051-1
㉘XTV3+6C
㊸RNW322
㊹XTV3+8C
㊻SDD47-2
㉛XTV3+8C
㊾SXE759
㊾
㊿RDR23
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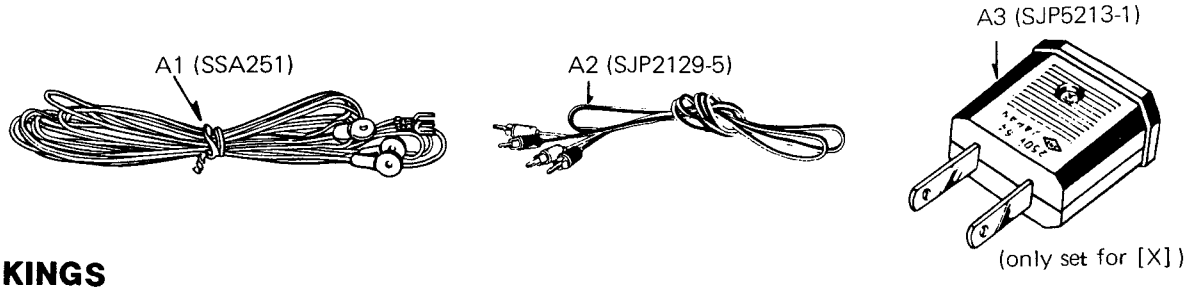
Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
11	SUS123	Spring, Push Switch Botton	5		
12	SGX6487	Sleeve, Push Switch Button	1		
13	SGX6483	Sleeve, Push Switch Button	1		
14	SGX6481	Sleeve, Push Switch Button	1		
15	SGL55	Orange Filter, Stereo Indicator	1	*○	
16	SKD3011	Dial Scale	1	*○	
17	SHP15-2	Paper, Pointer Slide	1		
18	SDP1111	Pointer, Dial	1	*○	
19	SGX693	Bracket, Dial Scale	1	○	
20	XTB3+8BFZ	Screw, Dial Scale M'tg	2		
21	SJT345	Socket, Dial Lamp	6		
22	XSN3+6S	Screw, Tuning Shaft Ass'y M'tg	3		
23	SHS6045	Shading Cloth, Output level Volume	1		
24	XNS8	Nut, Output Level Volume	1		
25	XWV8	Washer, Output Level Volume	1		
26	SHSA21	Shading Cloth, Output Level Volume	1		
27	XTB3+8BFZ	Screw, Glass Plate Bracket M'tg	2		
28	XTV3+6C	Screw, Side Chassi M'tg	3		
29	SHG1379	Paper Cloth, Glass Plate Bracket	1	○	
30	SUW1025	Bracket, Glass Plate	1	*○	
31	XTV3+8C	Screw, Dial Cord Shaft Ass'y M'tg	3		
32	SXE745	Shaft, Dial Cord Ass'y	1	○	
33	RDR20	Pulley, Dial	4		
34	RNW150-2	Washer, Pulley Lock	5		
35	XSN3+6S	Screw, Power Switch M'tg	2		
35-1	XWA3	Washer (Spring), Power Switch Screw	2		
36	SHG1383-1	Rubber Bracket, Stereo Indicator	1	○	
37	SSM101	Meter, Signal	1	○	
38	SHRA305	Lead Clamp	1		
39	SMM13	Bracket, Meter	1	*○	
40	XTV3+8C	Screw, Meter Bracket M'tg	1		
41	SSM103	Meter, Tuning	1		
42	SDT8031S	Shaft, Tuning Ass'y (With Flywheel)	1	*○	
43	RNW322	Washer, Tuning Capacitor Printed Circuit Board Ass'y	1		
44	XTV3+8C	Screw, Tuning Capacitor Printed Circuit Board Ass'y M'tg	3		
45	SDZ051-1	Cord, Dial 78-3/4" (200cm)	1roll		
46	SDD47-2	Drum, Dial Cord	1	○	
47	SDSA4121	Spring, Dial Cord	1		
48	SXE743	Shaft, Dial Cord Ass'y	1	○	
49	SXE759	Shaft, Dial Cord Ass'y	1		
50	RDR23	Pulley, Dial	1		
51	SJF3607	Terminal, Output & Deck Connection	1		
52	SMFA9	Bracket, Fuse Holder	1		
52-1	SJFA3	Holder, Fuse (5P)	1		
53	XTB4+8BFZ	Screw, Power Transformer M'tg	2		
54	SHR9317	Shading Cover	1	○	
55[X,XG,XGH, XGF]	SGP510-1A	Rear Panel	1	○	
55[XSD,XSW]	SGPT8080D	Rear Panel, SGP510-1A with Name Plate (SGT13831)	1	○	
55[XE]	SGP510-2A	Rear Panel	1	○	
55[XAL]	SGPT8080L	Rear Panel, SGP510-2A with Name Plate (SGT13832)	1	○	
56	XTB3+8BFZ	Screw, Rear Panel M'tg	4		
57	SJFA4402	Terminal, Antenna	1		
58	XTB3+8BFZ	Screw, Antenna Terminal M'tg	2		
59	SMA207	Bracket, Ferrite Antenna	1	*	
60	SMA205	Bracket, Ferrite Antenna	1	*	

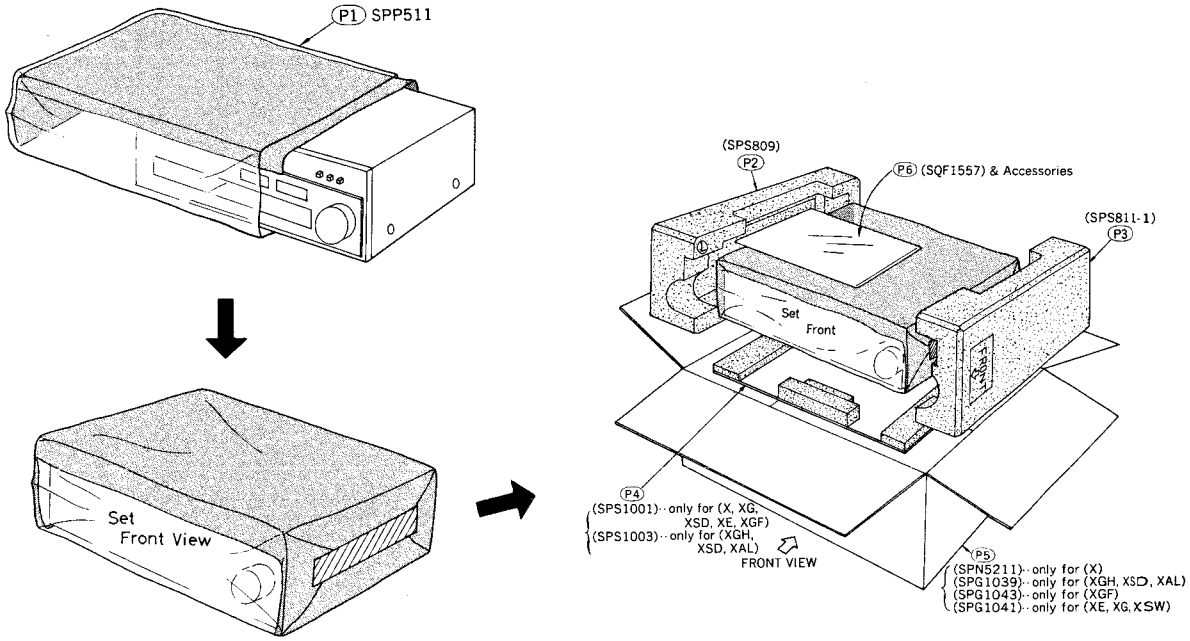
Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
61	SHR401-1	Latch, Output & Deck Connection Terminal	4		
62	SHR127	Bushing, AC Cord (Except Set [XE], [XAL])	1		
62[XE,XAL]	SHR131	Bushing, AC Cord	1		
63[XSW]	**SJA68**	AC Cord, with Plug	1		
63[XAL]	SJA79	AC Cord, with Plug	1		
63[XGH,XSD]	SJA81	AC Cord, with Plug	1		
63[X,XG,XGF]	SJA95	AC Cord, with Plug	1		
63[XE]	SJA73	AC Cord	1		
64	XNG3BS	Nut, Voltage Selector Switch (Except set for [XAL])	2		
64-1	XWA3B	Washer (Spring), Voltage Selector Switch (Except set for [XAL])	2		*
65	SUDA41	Spacer, Voltage Selector Switch (Except set for [XAL])	2		
66	XSB3+14FZS	Screw, Voltage Selector Switch (Except set for [XAL])	2		
67[XAL] only	SUE7	Cover Plate, Rear Panel Hole	1		
68	SKA8851	Cabinet	1		○
69	SHSA303	Paper Cloth, Cabinet	2		
70	SHSA6	Paper Cloth, Cabinet	2		
71	SQXA4112	Caushion Label, Cabinet Screw	1		
72	XTB4+10FFZ	Screw, Cabinet M'tg	4		
73	XWG4FZ	Washer, Cabinet Screw	4		
74	SKU6311	Bottom Board	1		○
75	SKL171	Foot	4		
76	XTB3+8B	Screw, Bottom Board M'tg	6		
77	SQXA4002	Caution Label, Bottom Board	1		
		ACCESSORIES			
A1	SSA251	Cord, FM Feeder Antenna	1		
A2	SJP2129-5	Cord, Connection	1		
A3[X] only	SJP5213-1	AC Plug (Only set for [X])	1		○
		PACKING PARTS			
P1	SPP511	Soft Cover	1		
P2	SPS809	Pad, Left Side	1		
P3	SPS811-1	Pad, Right Side	1		
P4[X,XG,XSD XE,XGF]	SPS1001	Pad, Bottom Side	1		○
P4[XGH,XSD, XAL]	SPS1003	Pad, Bottom Side	1		○
P5[X]	SPN5211	Carton Box, Set for [X]	1		○
P5[XGH,XSD, XAL]	SPG1039	Carton Box, Set for [XGH] ,[XSD] & [XAL]	1		○
P5[XG,XSW,XE]	SPG1041	Carton Box, Set for [XG] , [XSW] & [XE]	1		○
P5[XGF]	SPG1043	Carton Box, Set for [XGF]	1		○
P6	SQF1557	Instructions Book, (Printed Matter)	1		○

Notes:
The model [X] is available in Asia, Latin America, Middle East and Africa only.
The model [XAL] is available in Australia only.
The model [XG] is available in European only.
The model [XGH] is available in Holland only.
The model [XSD] is available in Scandinavia only.
The model [XSW] is available in Switzerland only.
The model [XE] is available in England only.
The model [XGF] is available in France only.

■ ACCESSORIES

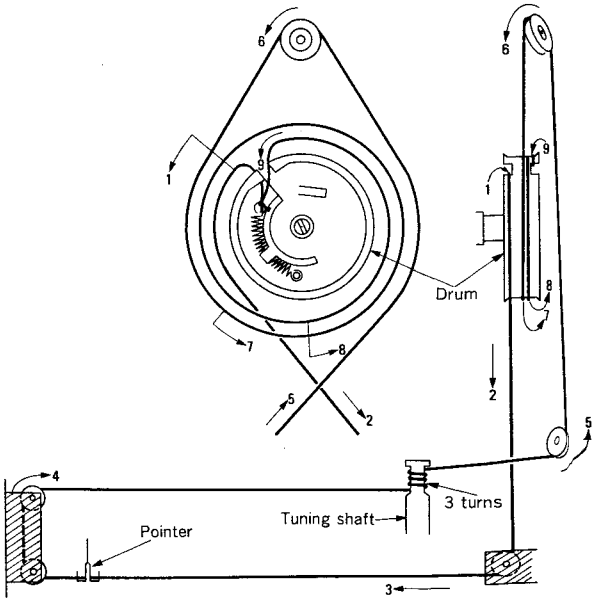


■ PACKINGS



■ DIAL CORD INSTALLATION GUIDE

- For threading a fresh cord, proceed as follws.
  1. Prepare a fresh cord more than 200cm (78-¾") in length.
  2. Bring the variable capacitor into a state where the drum is completely turned to the right (maximum capacity and lowest frequency for the variable capacitor).
  3. Direct the cord in the order from 1 to 9.
  4. Stretch the cord in such a tension as the spring length is elongated by 1.5 times that of the original state.
  5. Fix the knot of the cord with the bond.



Printed in Japan
7705-8,5 0

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